## REMARKS/ARGUMENTS

Applicants respectfully request reconsideration and allowance in view of the foregoing amendments and following remarks. In the Office Action, mailed January 30, 2008, the Examiner rejected claims 19-31. By this response, claim 1 has been amended; no claims have been canceled; and new claims 32-55 have been added. Following entry of this response, claims 19-55 will be pending in the application.

No new matter is being presented, and approval and entry of the amended and new claims is respectfully requested.

### *Claim Rejections – 35 USC § 103*

Claims 19-31 are rejected under 35 USC § 103(a), as allegedly being unpatentable over Bottomley (U.S. Patent No. 5,506,861) in view of Stopler et al. (U.S. Patent No. 6,920,194) (hereinafter "Stopler"). The rejections are respectfully overcome and reconsideration is requested. The following is a comparison between embodiments of the present invention and the cited references.

Independent claim 19, for example, is amended herein to recite a signal detector operative to determine a metric for a data transmission hypothesized to have been received; a threshold computation unit operative to determine a threshold based on the hypothesized data transmission; and a comparator operative to receive the metric and the threshold and provide an output indicating whether or not the data transmission is deemed to have been received. (For support, see paragraphs [0011] and [0098] of the present specification).

On page 2 of the Action, the Examiner notes that Bottomley does not teach or suggest a threshold computation unit, as recited in claim 19. However, Stopler is cited as disclosing this feature. Stopler discloses a system for detecting and correcting impulse noise, in which an impulse corrector module receives an input data signal and produces a corrected data signal having the impulse canceled or blanked. The Examiner cites column 5, lines 54-67, of Stopler, which discloses an impulse detection scheme that detects impulses and estimates their timing primarily through the use of quiet tones in a multi-tone transmission, using a first impulse

detector 12. A moving window threshold that detects impulses by thresholding the signal energy of the entire signal plus interference is used by a second impulse detector 14. The second impulse detector 14 uses an energy summation module 62 that receives the FIFO 60 output and generates the sum of the square values of the coordinates of this output. The energy values received from energy summing module 62 are compared to threshold $TH_{MW}$, the moving window impulse threshold. (See column 10, lines 25-38, and Fig. 4 of Stopler). All sample times comprising windows having energy higher than $TH_{MW}$ are considered to contain an impulse. It is noted that threshold $TH_{MW}$ appears to be predetermined and set in advance in thresholding module 64.

Neither Bottomley nor Stopler, alone or in combination, teaches or suggests a threshold computation unit operative to determine a threshold *based on* the hypothesized data transmission, *i.e.*, an adaptive threshold. That is, according to independent claim 19, the determined threshold may be computed, for example, based on the total received signal energy (*i.e.*, signal plus noise plus interference) of the hypothesized data transmission. As an exemplary advantage, the use of an adaptive threshold can provide robust detection performance in many operating environments, such as in an unlicensed frequency band where various sources of interference may be present. (See paragraph [0011] of the present specification). The threshold may be set, for example, based on a particular statistic for the transmission to be detected. This statistic may relate to the energy of the desired signal plus noise and interference in the transmission, or some other parameter. (See paragraph [0098] of the present specification). However, the presently claimed threshold is not simply a predetermined threshold, as Stopler appears to disclose, but is adaptive since it is *based on* the hypothesized data transmission.

Therefore, it is respectfully submitted that amended independent claim 19 patentably distinguishes over the cited art. Independent claims 28 and 31 currently recite determining a threshold for the hypothesized data transmission *based on* samples received for the hypothesized data transmission. Thus, it is submitted that independent claim 28 and 31 patentably distinguish over the cited art for the reasons provided herein, without further amendment.

Independent claims 24 and 29 recite processing received data symbols for a data transmission hypothesized to have been received to provide *remodulated* symbols that are

estimates of transmitted data symbols; and processing the received data symbols and the *remodulated* symbols to provide a detector output that indicates whether or not the data transmission is deemed to have been received.

The Examiner rejects independent claims 24 and 29 under the same rationale used in rejecting independent claim 19. However, independent claims 24 and 29 recite substantially distinct features not recited in independent claim I9. It is submitted, therefore, that the Examiner has not cited a reference teaching or suggesting providing *remodulated* symbols and processing the received data symbols and the *remodulated* symbols to provide a detector output.

It is respectfully submitted that all pending independent claims, as well as the dependent claims, patentably distinguish over the cited references, alone or in combination. Withdrawal of the rejections is therefore respectfully requested.

***New Claims 32-55***

New independent claims 32 and 37 are directed to computer-readable media with features substantially similar to those of independent claims 19 and 24, respectively. New independent claims 41 and 46 are directed to processors with features substantially similar to independent claims 19 and 24, respectively. Support for new independent claims 32, 37, 41 and 46 may be found throughout the specification, particularly in paragraph [0101] and [0102]. New claim 50 is an apparatus claim with features substantially similar to independent claim 24. It is respectfully submitted that the new independent claims, as well as the new dependent claims, are patentable for at least the reasons provided herein.

**CONCLUSION**

Therefore, for at least the reasons presented above with respect to all of the pending claims subsequent to entry of this response, Applicants assert that all claims are patentably distinct from all of the art of record. All objections and rejections having been addressed, it is respectfully submitted that this application is in condition for allowance and a Notice to that effect is earnestly solicited. If any points remain in issue that the Examiner feels may be best

resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

**Charge Statement**: For this application, the Commissioner is hereby authorized to charge any required fees or credit any overpayment to Deposit Account 17-0026.

Respectfully submitted,
QUALCOMM Incorporated
Customer Number: **23696**

Dated 30 April 2008
:

By: /Ross L. Franks/

Ross L. Franks
Reg. No. 47,233
(858) 845-1946

QUALCOMM Incorporated
Attn: Patent Department
5775 Morehouse Drive
San Diego, California 92121-1714
Telephone: (858) 658-5787
Facsimile: (858) 658-2502